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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,407	08/07/2003	Masaki Aoshima	890050.436	3159

500 7590 05/15/2006

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EXAMINER	
ANGEBRANNDT, MARTIN J	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/637,407	AOSHIMA ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/18 &1/25/05,1/16/04 &8/7/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/18 &1/25/05 1/16/04 & 8/7/03*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-16 should indicate that when irradiated the two recording layers undergo mixing in the same manner as recited in claims 17.

Claim 4 does not refer to any claim.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Shigeta et al. JP 59-225992.

Shigeta et al. JP 59-225992 in the examples describes an optical recording medium which is a 2 nm Ge layer overlayed with a 6 nm layer of Sn dispersed in SnO_2 and another 3 nm Ge layer. (page 5,upper left column), it is recorded upon using an 830 nm laser.

The examiner does not have a translation of this reference. If the applicant has one made, the examiner would appreciate a copy with the next response.

6. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Fukano et al. '073.

On a substrate, a WO_3 layer is coated, followed by a carbon film, followed by a $Sn_{90}Sr_{10}$ film and a UV cured protective layer. [0033]. This is recorded upon using a 780 nm laser.

7. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Okawa et al. JP 62-028941.

Okawa et al. JP 62-028941 in the examples describes an optical recording medium which is a Ge-C layer overlayed with a Te-C layer and these mix as shown in figures 2-4.

The examiner does not have a translation of this reference. If the applicant has one made, the examiner would appreciate a copy with the next response. The examiner holds that Ge is a primary component in the first layer and C is a primary component in the second.

8. Claims 1,2 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takoaka et al. JP 60-160036.

Takoaka et al. JP 60-160036 teaches an optical recording medium which has a Ge layer overcoated with an Al layer (page 4 upper left and upper right). The use of other materials in place of the Al including Sn is disclosed. (page 4/upper right column)

It would have been obvious to one skilled in the art to modify the invention of the cited example by replacing the Al layer with an Sn layer with a reasonable expectation of forming a useful and functional alloying optical recording media

9. Claims 1,2 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masabumi et al. JP 57-027788.

Masabumi et al. JP 57-027788 teaches in example 4 an optical recording medium which has a Ge oxide layer, a Sn layer and a Bi layer and dielectric layers which results in an Sn-Bi alloy (page 6,upper left and upper right columns). The use of other materials in place of the Bi including Se and Si are disclosed. (page 4/upper right column)

It would have been obvious to one skilled in the art to modify the invention of the cited example by replacing the Bi layer with an Si or Ge layer with a reasonable expectation of forming a useful and functional alloying optical recording media

The examiner does not have a translation of this reference. If the applicant has one made, the examiner would appreciate a copy with the next response. The examiner holds that Ge is a primary component in the first layer and C is a primary component in the second.

10. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuy et al. '160.

Shuy et al. '160 teach in example 4 an optical recording medium which has a ptrotective layer, an Si layer, an Si-Au layer, a protective layer [0044]. The use of other materials as the reflective layer materials including Sn is disclosed [0027]. The use of other materials for the transparent layer, including Si and Ge is disclosed. [0026]. The provision of protective layers on either side of the recording bilayer is disclosed. [0030].

It would have been obvious to one skilled in the art to modify the example by replacing the Si-Au with Sn with a reasonable expectation of forming a useful optical recording medium based upon the equivalence. Further, it would have been obvious to modify the resulting medium by using a Ge layer in place of the Si with a reasonable expectation of forming a useful optical recording medium based upon the discussion at [0026].

11. Claims 1,2 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. '819.

Lee et al. '819 teach an optical recording medium which has a Ge layer overcoated with an Al layer (page 4 upper left and upper right). The use of other materials in place of the Al including Sn is disclosed. (page 4/upper right column)

It would have been obvious to one skilled in the art to modify the invention of the cited example by replacing the Al layer with an Sn layer with a reasonable expectation of forming a useful and functional alloying optical recording media

12. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuy et al. '160, Lee et al. '819 or Takoaka et al. JP 60-160036, in view of Fukano et al. '860 or Fukano et al. '073

Fukano et al. '860 teach the use of carbon barrier layers between alloying/reaction recording bilayers (2/30-40, 3/5-20).

It would have been obvious to one skilled in the art to modify the teachings of Shuy et al. '160, Lee et al. '819 or Takoaka et al. JP 60-160036 by placing a barrier between the two sub layers of the recording medium to prevent premature reaction as taught by Fukano et al. '860 or Fukano et al. '073 with a reasonable expectation of realizing this benefit.

13. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inuoe et al. '080 or Inuoe et al. '825.

Inuoe et al. '080 and Inuoe et al. '825 teach in example 4 an optical recording medium which has a reflective layer, a dielectric layer, a Cu based layer, a Si layer another dielectirc layer and are recorded upon and read using with a 405 nm laser and an NA of 0.85 [0134-0153]. The use of other materials as the reflective layer materials including Sn is disclosed [0027]. The use of other materials for the first recording layer , including Sn and Ge is disclosed. [0014].

It would have been obvious to one skilled in the art to modify the example by replacing the Cu with Sn or Ge with a reasonable expectation of forming a useful optical recording medium based upon the equivalence.

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No.

11/268109 (US 2006/0078825). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments where Si is present in one of the recording layers and either Sn, C or Ge are the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

16. Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/608814 (US 2004/0038080). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments where Si is present in one of the recording layers and either Sn, C or Ge are the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

17. Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/818324 (US 2004/0202097). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments where Si is present in one of the recording layers and either Sn, C or Ge are the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

18. Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/748979 (US 2004/0152016). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments where Si, Ge or Sn are present in one of the recording layers and C is the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

05/12/2006